

TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER

EX99-004 C-US

U.S. APPLICATION NO. (If known, see 37 CFR 1.5)

10/018,248

INTERNATIONAL APPLICATION NO.
PCT/US00/15880INTERNATIONAL FILING DATE
06/08/2000PRIORITY DATE CLAIMED
06/14/1999

TITLE OF INVENTION Animal Models and Methods for Analysis of Lipid Metabolism and Screening of Pharmaceutical and Pesticidal Agents that Modulate Lipid Metabolism

APPLICANT(S) FOR DO/EO/US Costa et al.

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

- This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
- This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
- This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
- The US has been elected by the expiration of 19 months from the priority date (Article 31).
- A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - is attached hereto (required only if not communicated by the International Bureau).
 - has been communicated by the International Bureau.
 - is not required, as the application was filed in the United States Receiving Office (RO/US).
- An English language translation of the International Application as filed (35 U.S.C. 371(c)(2))
 - is attached hereto.
 - has been previously submitted under 35 U.S.C. 154(d)(4).
- Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - are attached hereto (required only if not communicated by the International Bureau).
 - have been communicated by the International Bureau.
 - have not been made; however, the time limit for making such amendments has NOT expired.
 - have not been made and will not be made.
- An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
- An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
- An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern document(s) or information included:

- An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
- An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
- A **FIRST** preliminary amendment.
- A **SECOND** or **SUBSEQUENT** preliminary amendment.
- A substitute specification.
- A change of power of attorney and/or address letter.
- A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.
- A second copy of the published international application under 35 U.S.C. 154(d)(4).
- A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).
- Other items or information: *return receipt postcard; Notification of Defective Response (2p); Raw Sequence Listing Error Report (11p)*

21. The following fees are submitted:

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)):

Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO \$1040.00

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO \$890.00

International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO \$740.00

International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) \$710.00

International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) \$100.00

ENTER APPROPRIATE BASIC FEE AMOUNT =

CALCULATIONS PTO USE ONLY

Surcharge of \$130.00 for furnishing the oath or declaration later than 20 30 months from the earliest claimed priority date (37 CFR 1.492(e)).

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	\$
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Total claims	- 20 =		x \$18.00	\$
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Independent claims	- 3 =		x \$84.00	\$
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MULTIPLE DEPENDENT CLAIM(S) (if applicable)		+ \$280.00	\$
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TOTAL OF ABOVE CALCULATIONS =

<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.	+ \$
--	------

SUBTOTAL =

Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)).	\$
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TOTAL NATIONAL FEE =

Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +	\$
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TOTAL FEES ENCLOSED =

Amount to be refunded:	\$
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charged:	\$
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- a. A check in the amount of \$ _____ to cover the above fees is enclosed.
- b. Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.
- c. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-1108. A duplicate copy of this sheet is enclosed.
- d. Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137 (a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Jan P. Brunelle
Exelixis, Inc.
P.O. Box 511
170 Harbor Way
S. San Francisco, CA 94083-0511

Jan P. Brunelle
SIGNATURE
Jan P. Brunelle
NAME
35,081
REGISTRATION NUMBER



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents, Box PCT
 United States Patent and Trademark Office
 Washington, D.C. 20231
www.uspto.gov

U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/018,248	Costa	EX 99-004C-US
INTERNATIONAL APPLICATION NO.		
PCT/US00/15880		
I.A. FILING DATE	PRIORITY DATE	
06/08/2000		
CONFIRMATION NO. 6072		
371 FORMALITIES LETTER		
 *OC000000008255767*		

Date Mailed: 06/12/2002

NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- U.S. Basic National Fee
- Biochemical Sequence Diskette
- Biochemical Sequence Listing
- Copy of IPE Report
- Copy of the International Application
- Copy of the International Search Report
- Oath or Declaration
- Request for Immediate Examination

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):
 - A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
 - **APPLICANT MUST PROVIDE:**
 - An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.

DOCKETED
 Exelixis, Inc.

JUN 19 2002

- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:

- For Rules Interpretation, call (703) 308-4216
- To Purchase PatentIn Software, call (703) 306-2600
- For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

- A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

*A copy of this notice **MUST** be returned with the response.*

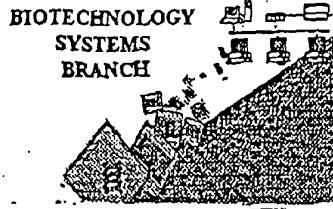
LAMONT M HUNTER

Telephone: (703) 305-3686

PART 1 - ATTORNEY/APPLICANT COPY

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/018,248	PCT/US00/15880	EX 99-004C-US

FORM PCT/DO/EO/916 (371 Formalities Notice)



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/018,248
Source: PCT/10
Date Processed by STIC: 5/22/02

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/wcb/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>), EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 01/29/2002



PCT10

RAW SEQUENCE LISTING DATE: 05/22/2002
 PATENT APPLICATION: US/10/018,248 TIME: 15:48:57

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 Output Set: N:\CRF3\05222002\J018248.raw

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3 <110> APPLICANT: EXELIXIS, INC.
5 <120> TITLE OF INVENTION: ANIMAL MODELS AND METHODS FOR ANALYSIS OF LIPID
6   METABOLISM AND SCREENING OF PHARMACEUTICAL AND
7   PESTICIDAL AGENTS THAT MODULATE LIPID METABOLISM
9 <130> FILE REFERENCE: SREBP-INT
--> 11 <140> CURRENT APPLICATION NUMBER: US/10/018,248
12 <141> CURRENT FILING DATE: 2000-06-08
14 <150> PRIOR APPLICATION NUMBER: 09/332,522
15 <151> PRIOR FILING DATE: 1999-06-14
17 <150> PRIOR APPLICATION NUMBER: 60/189,700
18 <151> PRIOR FILING DATE: 2000-03-15
20 <160> NUMBER OF SEQ ID NOS: 8
22 <170> SOFTWARE: PatentIn Ver. 2.1

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ERRONEOUS SEQUENCES

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91 <212> TYPE: PRT
92 <213> ORGANISM: Caenorhabditis elegans
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99      20          25          30
101 Pro Leu Asp Phe Asp Met Glu His Asn Trp Gln Glu Pro Gly Pro Ser
102      35          40          45
104 Gln Gln Pro Asp Pro Ser Ile Pro Gly Asn Gln His Ser Pro Pro Gln
105      50          55          60
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108      65          70          75          80
110 Leu Leu Asn His Asn Asn Asp Phe Phe Ser Met Arg Phe Ser Pro
111      85          90          95
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114      100         105         110
116 Gln Gln Leu Ser Gly Glu Gly Pro Ala Ser Met Leu Asn Pro Leu Gln
117      115         120         125
119 Thr Ser Pro Pro Ser Gly Gly Tyr Pro Pro Ala Asp Ala Tyr Arg Pro
120      130         135         140
122 Leu Ser Leu Ala Gln Gln Leu Ala Ala Pro Ala Met Thr Pro His Gln
123 145           150           155           160
125 Ala Ala Ser Leu Phe Val Asn Thr Asn Gly Ile Asp Gln Lys Asn Phe

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RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/018,248

DATE: 05/22/2002
TIME: 15:48:57

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131	Pro Tyr Thr Glu Ala Met Gly His Ile Asn Gly Tyr Met Ser Pro Tyr			
132	195	200	205	
134	Asp Gln Ala Gln Gly Pro Ser Gly Pro Ser Tyr Tyr Ser Gln His His			
135	210	215	220	
137	Gln Ser Pro Pro Pro His His His His His His Pro Met Pro Lys Ile			
138	225	230	235	240
140	His Glu Asn Pro Glu Gln Val Ala Ser Pro Ser Ile Glu Asp Ala Pro			
141	245	250	255	
143	Glu Thr Lys Pro Thr His Leu Val Glu Pro Gln Ser Pro Lys Ser Pro			
144	260	265	270	
146	Gln Asn Met Lys Glu Glu Leu Leu Arg Leu Leu Val Asn Met Ser Pro			
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149	Ser Glu Val Glu Arg Leu Lys Asn Lys Lys Ser Gly Ala Cys Ser Ala			
150	290	295	300	
152	Thr Asn Gly Pro Ser Arg Ser Lys Glu Lys Ala Ala Lys Ile Val Ile			
153	305	310	315	320
155	Gln Glu Thr Ala Glu Gly Asp Glu Asp Glu Asp Asp Glu Asp Ser Asp			
156	325	330	335	
158	Ser Gly Glu Thr Met Ser Gln Gly Thr Thr Ile Ile Val Arg Arg Pro			
159	340	345	350	
161	Lys Thr Glu Arg Arg Thr Ala His Asn Leu Ile Glu Lys Lys Tyr Arg			
162	355	360	365	
164	Cys Ser Ile Asn Asp Arg Ile Gln Gln Leu Lys Val Leu Leu Cys Gly			
165	370	375	380	
167	Asp Glu Ala Lys Leu Ser Lys Ser Ala Thr Leu Arg Arg Ala Ile Glu			
168	385	390	395	400
170	His Ile Glu Glu Val Glu His Glu Asn Gln Val Leu Lys His His Val			
171	405	410	415	
173	Glu Gln Met Arg Lys Thr Leu Gln Asn Asn Arg Leu Pro Tyr Pro Glu			
174	420	425	430	
176	Pro Ile Gln Tyr Thr Glu Tyr Ser Ala Arg Ser Pro Val Glu Ser Ser			
177	435	440	445	
179	Pro Ser Pro Pro Arg Asn Glu Arg Lys Arg Ser Arg Met Ser Thr Thr			
180	450	455	460	
182	Thr Pro Met Lys Asn Gly Thr Arg Asp Gly Ser Ser Lys Val Thr Leu			
183	465	470	475	480
185	Phe Ala Met Leu Leu Ala Val Leu Ile Phe Asn Pro Ile Gly Leu Leu			
186	485	490	495	
188	Ala Gly Ser Ala Ile Phe Ser Lys Ala Ala Ala Glu Ala Pro Ile Ala			
189	500	505	510	
191	Ser Pro Phe Glu His Gly Arg Val Ile Asp Asp Pro Asp Gly Thr Ser			
192	515	520	525	
194	Thr Arg Thr Leu Phe Trp Glu Gly Ser Ile Ile Asn Met Ser Tyr Val			
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197	Trp Val Phe Asn Ile Leu Met Ile Ile Tyr Val Val Val Lys Leu Leu			
198	545	550	555	560

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/018,248

DATE: 05/22/2002
TIME: 15:48:57

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Output Set: N:\CRF3\05222002\J018248.raw

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 207 595 600 605
 209 Arg Ser Leu Pro Ser Pro Gly Val Asp Ser Val Phe Ser Val Gly Trp
 210 610 615 620
 212 Glu Cys Val Arg His Leu Leu Asn Trp Leu Trp Ile Gly Arg Tyr Ile
 213 625 630 635 640
 215 Ala Arg Arg Arg Ser Thr Thr Lys Pro Val Ser Val Val Cys Arg
 216 645 650 655
 218 Ser His Ala Gln Thr Ala Val Leu Tyr His Glu Ile His Gln Leu His
 219 660 665 670
 221 Leu Met Gly Ile Thr Gly Asn Phe Glu Asp Thr Tyr Glu Pro Ser Ala
 222 675 680 685
 224 Leu Thr Gly Leu Phe Met Ser Leu Cys Ala Val Asn Leu Ala Glu Ala
 225 690 695 700
 227 Ala Gly Ala Ser Asn Asp Gly Leu Pro Arg Ala Val Met Ala Gln Ile
 228 705 710 715 720
 230 Tyr Ile Ser Ala Ser Ile Gln Cys Arg Leu Ala Leu Pro Asn Leu Leu
 231 725 730 735
 233 Ala Pro Phe Phe Ser Gly Tyr Phe Leu Arg Arg Ala Arg Arg His Val
 234 740 745 750
 236 Arg Arg Ala Pro Glu His Ser Val Ser His Leu Leu Trp Ile Phe His
 237 755 760 765
 239 Pro Ala Thr Arg Lys Phe Met Ser Asp Ala Lys Arg Leu Glu His Val
 240 770 775 780
 242 Leu Ser Ser Lys Gln Lys Gln Leu Arg Phe Gly Ser Phe Val Glu Asp
 243 785 790 795 800
 245 Glu Gln Leu Ser Pro Leu Ala Arg Ile Arg Thr Thr Leu Lys Val Tyr
 246 805 810 815
 248 Leu Leu Ser Lys Leu Val Gln Glu Leu Val Gly Gly Asp Glu Ile Phe
 249 820 825 830
 251 Thr Lys Asn Val Glu Arg Ile Leu Asn Asp Asn Asp Arg Leu Asp Asp
 252 835 840 845
 254 Glu Val Asp Val Val Asp Val Ser Arg Leu Leu Val Thr Ile Ser Thr
 255 850 855 860
 257 Gln Cys Ala Ala Ile Leu Thr Asn Glu Lys Asp Glu Ser Ala Lys Phe
 258 865 870 875 880
 260 Gly Thr Trp Ile Ser Arg Asn Gly Asp Ala Cys Cys Thr Trp Thr
 261 885 890 895
 263 His Val Leu Thr Cys Gly Ile Tyr Trp Arg Ser Asn Lys Asn Glu Leu
 264 900 905 910
 266 Ala Arg Gln His Tyr Ser Leu Ile Arg Asn Cys Pro Pro Lys Ile Leu
 267 915 920 925
 269 Thr Asp Asn Leu Gly Leu Ala Val Gly His Ala Leu Cys Ala Arg Lys
 270 930 935 940
 272 Ile Cys Ile Asp Asp Arg Asp Ser Pro Lys Val Ser Gln Tyr Val Cys

See page 9

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/018,248

DATE: 05/22/2002

TIME: 15:48:57

Input Set : A:\PCT.US00.15880.APP
 Output Set: N:\CRF3\05222002\J018248.raw

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281	Met Ala Tyr Glu Trp Ile Met Asn Ser Leu Leu Asp Ala Trp Arg Ser			
282	995	1000	1005	
284	Asn Leu Phe Ala Ser Lys Pro Tyr Trp Thr Gln Ser Phe Lys Gly Gln			
285	1010	1015	1020	
287	Ser Thr Phe Ser Thr Leu Tyr Gln Glu Ala Tyr Asn His Tyr Ala Ile			
288	1025	1030	1035	1040
290	Ile Asn Gly Thr Arg Gly Asp Cys Trp Arg Leu Phe Val Tyr Glu Leu			
291	1045	1050	1055	
293	Thr Cys Arg Met Leu Asn Gly Ala Asn Pro Gln Ala Thr Trp Ser Gly			
294	1060	1065	1070	
--> 296	Xaa Arg Arg Val Arg Ser Thr Lys Met Asp Ala Val Arg Gly Arg Val			
297	1075	1080	1085	
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777	ccgagaatcc tacatcgccag caaaaacttct tggttcaaac gtaacgaact ggagaattgt 240			
778	tcccccgtcta aatttggctt ggcaatatcc aagtgtttt gatactttac gagtttgcga 300			
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786	cggccatctt tacatattta aagttttac gaactccaa gtttcttaca cttectgggt 780			
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/018,248

DATE: 05/22/2002

TIME: 15:48:58

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 Output Set: N:\CRF3\05222002\J018248.raw

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 860 130 135 140
 862 Cys Ser Val Leu His Ala Asn Ile Leu Trp Lys Leu Gly Ile Thr Gly
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 866 165 170 175
 868 Pro His Phe Arg Asn Val Lys Glu Arg Thr Asn Trp Thr Asn Glu Lys
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 871 Ser Leu Asp Asp Arg Val Ser His Gly Thr Phe Val Ala Gly Val Ile
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 874 Ala Ser Ser Arg Glu Cys Leu Gly Phe Ala Pro Asp Ala Asp Leu Tyr
 875 210 215 220
 877 Ile Phe Lys Val Phe Thr Asn Ser Gln Val Ser Tyr Thr Ser Trp Phe
 878 225 230 235 240
 880 Leu Asp Ala Phe Asn Tyr Ala Ile Tyr Arg Lys Ile Asn Ile Leu Asn
 881 245 250 255
 883 Leu Ser Ile Gly Gly Pro Asp Phe Met Asp Ser Pro Phe Val Glu Lys
 884 260 265 270
 886 Val Leu Glu Leu Ser Ala Asn Asn Val Ile Met Ile Ser Ala Ala Gly
 887 275 280 285
 889 Asn Asp Gly Pro Leu Tyr Gly Thr Leu Asn Asn Pro Gly Asp Gln Ser
 890 290 295 300
 892 Asp Val Val Gly Gly Ile Gln Phe Asp Asp Lys Ile Ala Lys
 893 305 310 315 320
 895 Phe Ser Ser Arg Gly Met Thr Thr Trp Glu Leu Pro Leu Gly Tyr Gly
 896 325 330 335
 898 Arg Met Gly Leu Asp Ile Val Thr Tyr Gly Ser Gln Val Glu Gly Ser
 899 340 345 350
 901 Asp Val Arg Lys Gly Cys Arg Arg Leu Ser Gly Thr Ser Val Ser Ser
 902 355 360 365
 904 Pro Val Val Ala Gly Ala Ala Leu Leu Ile Ser Gly Ala Phe Gln
 905 370 375 380
 907 Lys Ile Asp Tyr Ile Asn Pro Ala Ser Leu Lys Gln Val Leu Ile Glu
 908 385 390 395 400
 910 Gly Ala Glu Lys Leu Pro His Tyr Asn Met Phe Glu Gln Gly Ala Gly
 911 405 410 415
 913 Lys Leu Asn Leu Leu Lys Ser Met Gln Leu Leu Ser Tyr Lys Pro
 914 420 425 430
 916 Lys Ile Thr Leu Ile Pro Ala Tyr Leu Asp Phe Thr Gln Asn Tyr Met
 917 435 440 445
 919 Trp Pro Tyr Ser Ser Gln Pro Leu Tyr Tyr Gly Ser Ser Val Ala Ile
 920 450 455 460
 922 Ala Asn Val Thr Ile Leu Asn Gly Ile Ser Val Thr Ser His Ile Val
 923 465 470 475 480
 925 Gly Ile Pro Lys Trp Ile Pro Asp Phe Glu Asn Gln Gly Gln Phe Leu
 926 485 490 495
 928 Gln Val Ser Ala Gln Val Ser Pro Ile Val Trp Pro Trp Thr Gly Trp

RAW SEQUENCE LISTING

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Input Set : A:\PCT.US00.15880.APP
 Output Set: N:\CRF3\05222002\J018248.raw

929	500	505	510
931	Met Ser Val Phe Ile Ala Val Lys Lys Glu Gly Glu Asn Phe Glu Gly		
932	515	520	525
934	Val Cys Lys Gly Ser Ile Thr Leu Val Leu Glu Ser Phe Lys Gln Thr		
935	530	535	540
937	Thr Asn Glu Thr His Val Thr Glu Val Asp Phe Pro Leu Thr Ile Lys		
938	545	550	555
940	Val Thr Pro Lys Pro Pro Arg Asn Lys Arg Ile Leu Trp Asp Gln Tyr		560
941	565	570	575
943	His Ser Leu Arg Tyr Pro Pro Arg Tyr Ile Pro Arg Asp Asp Leu Lys		
944	580	585	590
946	Val Lys Leu Asp Pro Leu Asp Trp Arg Ala Asp His Ile His Thr Asn		
947	595	600	605
949	Phe Arg Asp Met Tyr Thr His Leu Arg Asn Val Gly Tyr Tyr Ile Asp		
950	610	615	620
952	Val Leu Arg Glu Pro Phe Thr Cys Phe Asn Ala Ser Asp Tyr Gly Ala		
953	625	630	635
955	Leu Leu Ile Val Asp Pro Glu Arg Gly Phe Gly Asp Glu Glu Ile Asn		640
956	645	650	655
958	Ala Leu Gln Glu Asn Val Tyr Lys Arg Gly Leu Asn Val Val Phe		
959	660	665	670
961	Gly Asp Trp Tyr Asn Thr Thr Val Met Lys Lys Ile Lys Phe Phe Asp		
962	675	680	685
964	Glu Asn Thr Arg Gln Trp Trp Thr Pro Asp Thr Gly Gly Ala Asn Ile		
965	690	695	700
967	Pro Ala Leu Asn Asp Leu Leu Lys Pro Phe Gly Ile Ala Phe Gly Asp		
968	705	710	715
970	Phe Val Gly Glu Gly His Phe Lys Leu Gly Asp His Ser Met Tyr Tyr		720
971	725	730	735
973	Ala Ser Gly Ala Thr Ile Val Lys Phe Pro Met Asn Pro Gly Asp Ile		
974	740	745	750
976	Ile Val Gly Thr Lys Leu Asn Asp Gln Gly Leu Ser Ile Ile Asn Ser		
977	755	760	765
979	Lys Thr Pro Ser Lys Val Ala Lys Leu Asp Val Pro Ile Phe Gly Met		
980	770	775	780
982	Phe Gln Thr Lys Ala Asn Ser Ile Gln Ser Asn Glu Glu Ile Val Val		
983	785	790	795
985	Asn Ala Glu Ser Asn Leu Ala Glu Ala Ile Pro Thr Asp Tyr Ser Thr		800
986	805	810	815
988	Phe Lys Asn Arg Val Leu Leu Arg Thr Lys Gln Arg Ser Ile Ser		
989	820	825	830
991	Phe Ala Lys Ser Asn Asn His Glu Thr Lys Asn Glu Gly Arg Ile Ala		
992	835	840	845
994	Val Tyr Gly Asp Ser Asn Cys Leu Asp Ser Thr His Leu Glu Lys Ala		
995	850	855	860
997	Cys Tyr Trp Leu Leu Ile Thr Phe Leu Asp Phe Ala Ile Asn Ser His		
998	865	870	875
1000	Lys Ser Ser Leu Leu Gln Asn Leu Asn Arg Ile Thr Glu Phe His Lys		880
1001	885	890	895

RAW SEQUENCE LISTING
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1003	Leu	Glu	Arg	Ala	Pro	Leu	Pro	Leu	Arg	Ile	Ser	Gln	Ser	Ile	Ile	Lys
1004		900				905								910		
1006	Ser	Arg	Ser	Gln	Asp	Asn	Asn	Cys	Glu	Gln	Phe	Lys	Trp	Leu	Ala	Pro
1007					915			920						925		
1009	Thr	Lys	Gln	Asn	Asn	Ala	Glu	Glu	Arg	Lys	Ser	Ser	Ile	Ile	Asp	Val
1010						930		935					940			
1012	Thr	Ile	Leu	Glu	Asn	Glu	Glu	His	Glu	Ile	Asn	Leu	Ile	Lys	Asn	Leu
1013		945					950					955			960	
1015	Leu	Gly	Glu	Glu	Ile	Ala	Lys	Leu	Gly	Gln	Asn	Asn	Asp	Tyr	Leu	Thr
1016						965				970			975			
1018	Gly	Met	Gln	Ser	Ala	Asp	Ser	Leu	Met	Thr	Pro	Ile	Tyr	Ser	Asn	Tyr
1019						980			985			990				
--> 1021	Xaa															

see page 9

VARIABLE LOCATION SUMMARY
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Input Set : A:\PCT.US00.15880.APP
Output Set: N:\CRF3\05222002\J018248.raw

e of n's or Xaa's(NEW RULES):

e of n's and/or Xaa's have been detected in the Sequence Listing.

e of <220> to <223> is MANDATORY if n's or Xaa's are present.

<220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

q#:2; Xaa Pos. 1073
q#:7; N Pos. 3038,3049
q#:8; Xaa Pos. 993

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/018,248

DATE: 05/22/2002

TIME: 15:48:59

Input Set : A:\PCT.US00.15860.APP

Output Set: N:\CRF3\05222002\J018248.raw

11 M:270 C: Current Application Number differs, Replaced Current Application Number

296 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:2

824 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:7

1021 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:8